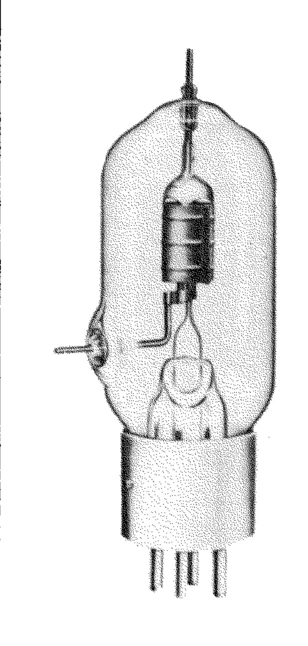
EITEL-McCULLOUGH, INC.
SAN BRUNO, CALIFORNIA

# 35TG

HIGH-MU TRIODE
•
MODULATOR
OSCILLATOR
AMPLIFIER



## GENERAL CHARACTERISTICS

### ELECTRICAL

Filament: Thoriated tungsten

| | |
|---|---|
| Voltage | 5.0 volts |
| Current | 4.0 amperes |
| Amplification Factor (Average) | 39 |

Direct Interelectrode Capacitances (Average)

| | |
|---|---|
| Grid-Plate | 1.8 $\mu\mu$f |
| Grid-Filament | 2.5 $\mu\mu$f |
| Plate-Filament | 0.4 $\mu\mu$f |
| Transconductance ($I_b$=100 ma., $E_b$=2000, $e_c$=−30) | 2850 $\mu$mhos |
| Frequency for Maximum Ratings | 100 mc. |

### MECHANICAL

| | |
|---|---|
| Base (Medium 4-pin bayonet, ceramic) | RMA type M8-078 |
| Basing | RMA type 2M |

Maximum Overall Dimensions:

| | |
|---|---|
| Length | 5.75 inches |
| Diameter | 1.81 inches |
| Net weight | 2.5 ounces |
| Shipping weight (Average) | 1.25 pounds |

### AUDIO FREQUENCY POWER AMPLIFIER AND MODULATOR

**Class B**

| | Typical Operation—2 Tubes | | | Max. Rating | |
|---|---|---|---|---|---|
| D-C Plate Voltage | 1000 | 1500 | 2000 | 2000 | volts |
| Max.-Signal D-C Plate Current, per tube* | • | • | • | 150 | ma. |
| Plate Dissipation, per tube* | • | • | • | 50 | watts |
| D-C Grid Voltage (approx.) | −8 | −25 | −40 | | volts |
| Peak A-F Grid Input Voltage | 240 | 250 | 255 | | volts |
| Zero-Signal D-C Plate Current | 67 | 45 | 34 | | ma. |
| Max.-Signal D-C Plate Current | 240 | 200 | 167 | | ma. |
| Max.-Signal Driving Power (approx.) | 7 | 5 | 4 | | watts |
| Effective Load, Plate-to-Plate | 7900 | 16200 | 27500 | | ohms |
| Max.-Signal Plate Power Output | 140 | 200 | 235 | | watts |

*Averaged over any sinusoidal audio frequency cycle.

### RADIO FREQUENCY POWER AMPLIFIER AND OSCILLATOR

**Class-C *Telegraphy**
(Key down conditions without modulation)

| | Typical Operation—1 Tube | | | Max. Rating | |
|---|---|---|---|---|---|
| D-C Plate Voltage | 1000 | 1500 | 2000 | 2000 | volts |
| D-C Plate Current | 125 | 125 | 125 | 150 | ma. |
| D-C Grid Current | 40 | 40 | 45 | 50 | ma. |
| D-C Grid Voltage | −60 | −120 | −135 | | volts |
| Plate Power Output | 87 | 141 | 200 | | watts |
| Plate Input | 125 | 188 | 250 | | watts |
| Plate Dissipation | 38 | 47 | 50 | 50 | watts |
| Peak R. F. Grid Input Voltage, (approx.) | 165 | 250 | 285 | | volts |
| Driving Power, (approx.) | 7 | 9 | 13 | | watts |

*The above figures show actual measured tube performance, and do not allow for variations in circuit losses.

# EIMAC 35TG CONSTANT CURRENT CHARACTERISTICS

GRID VOLTAGE - VOLTS

-300 -200 -100 0 100 200 300 400 500

PLATE VOLTAGE - VOLTS

0 250 500 750 1000 1250 1500 1750 2000 2250 2500 2750 3000 3250

GRID CURRENT - MILLIAMPERES

25 50 75 100 150 200 250 300 350 400 450 500 550 600

PLATE CURRENT - MILLIAMPERES

0 50 100 200 300 400 500 600 700 800 900 1000

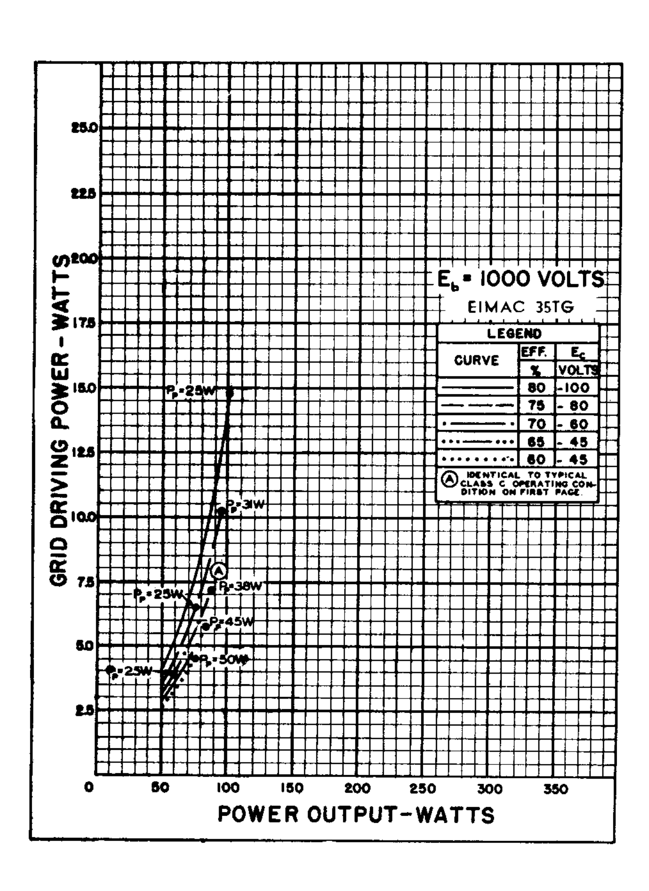
# DRIVING POWER vs. POWER OUTPUT

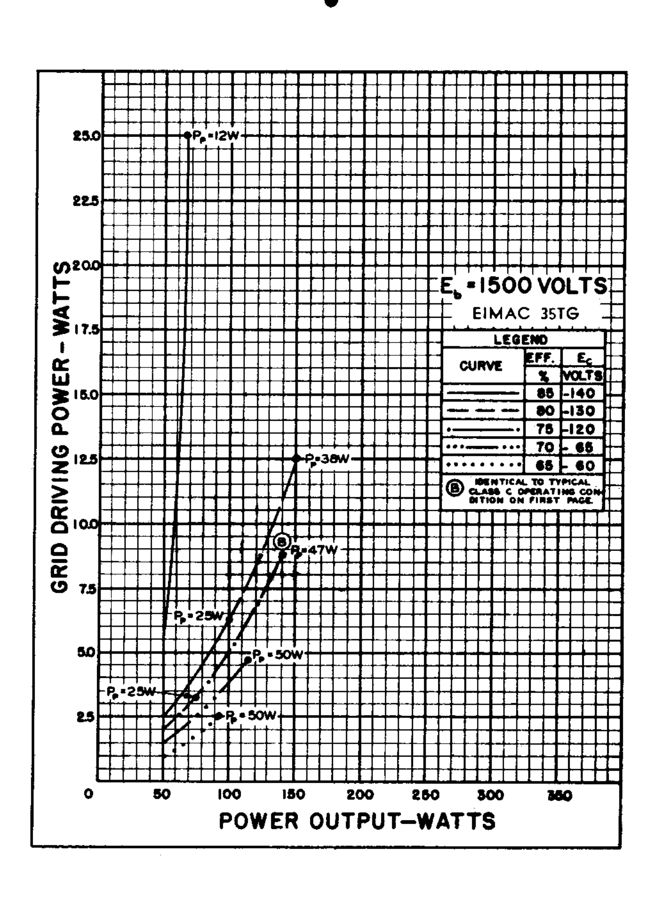
•

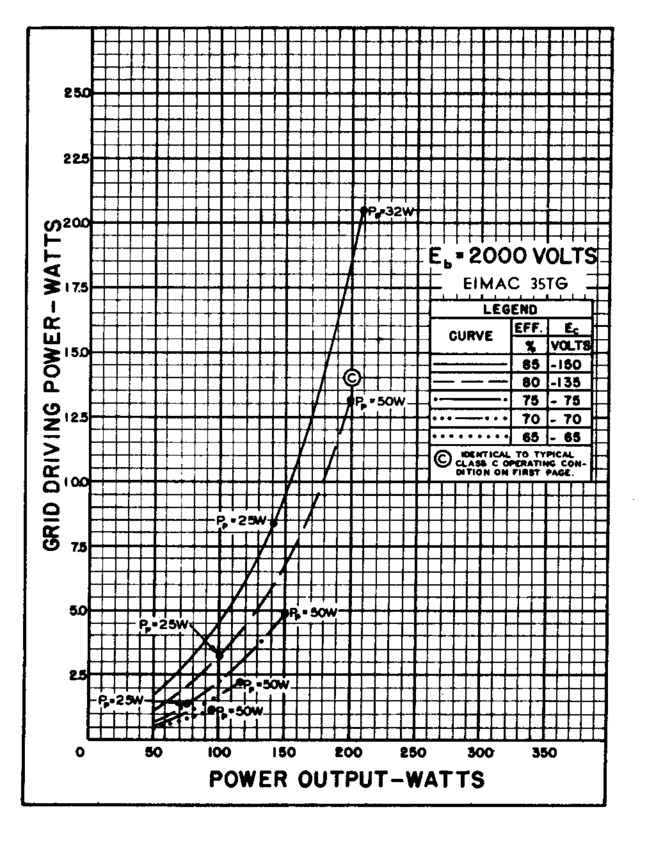
The three charts on this page show the relationship of plate efficiency, power output and grid driving power at plate voltages of 1000, 1500 and 2000 volts. These charts show combined grid and bias losses only. The driving power and power output figures do not include circuit losses. The plate dissipation in watts is indicated by $P_p$.

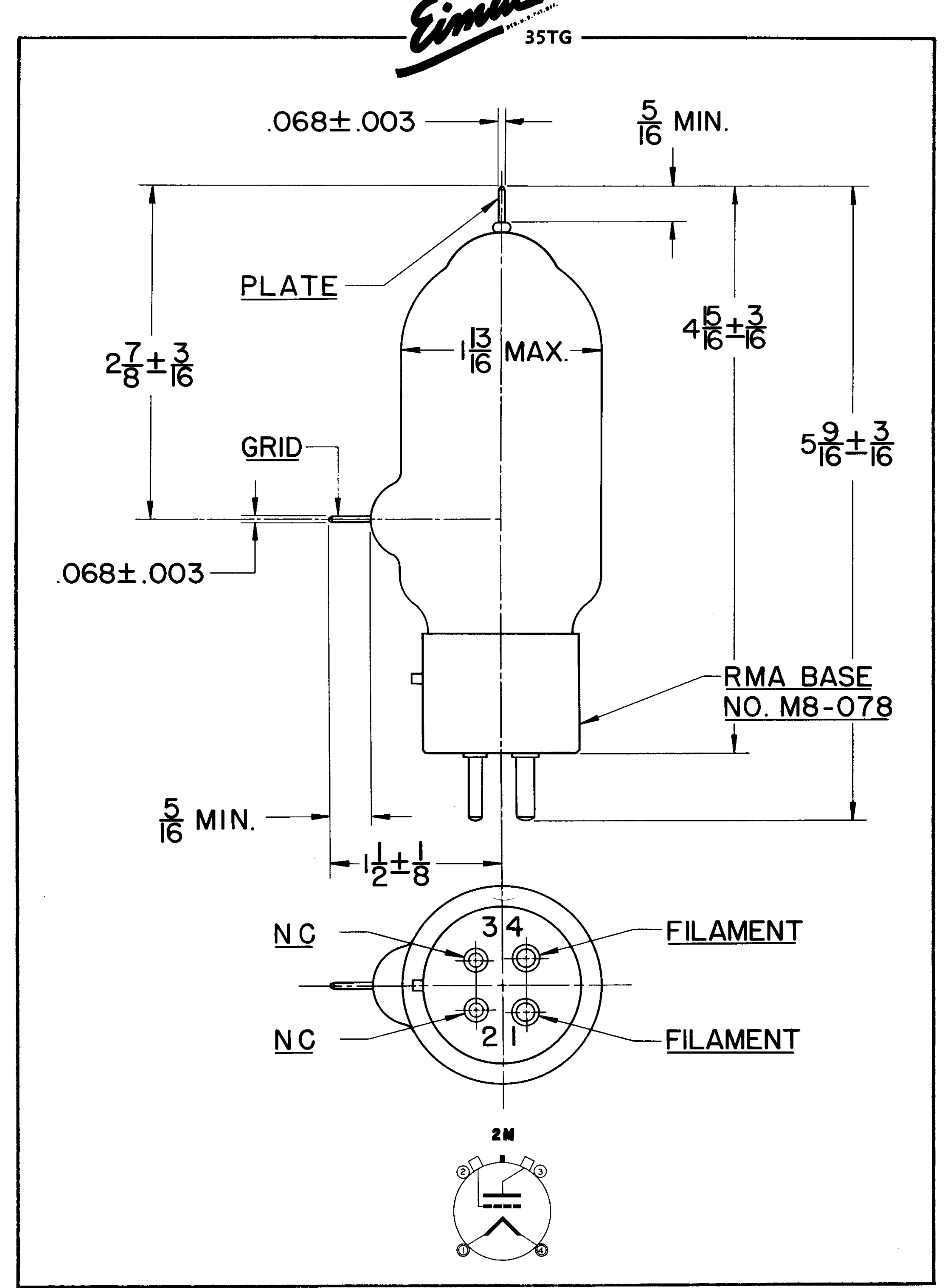
Points A, B, and C are identical to the typical Class C operating conditions shown on the first page under 1000, 1500, and 2000 volts respectively.

•




Eimac
REG. U.S. PAT. OFF.
35TG
.068±.003
5/16 MIN.
PLATE
2 7/8 ± 3/16
1 13/16 MAX.
4 15/16 ± 3/16
5 9/16 ± 3/16
GRID
.068±.003
RMA BASE
NO. M8-078
5/16 MIN.
1 1/2 ± 1/8
NC
3 4
FILAMENT
NC
2 1
FILAMENT
2M

2-D6-21728